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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/865,166

05/24/2001

Raymond T. Hsu

PA010115

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03/14/2006

QUALCOMM, INC  
5775 MOREHOUSE DR.  
SAN DIEGO, CA 92121

EXAMINER

RYMAN, DANIEL J

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/865,166

Applicant(s)

HSU ET AL.

Examiner

Daniel J. Ryman

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2/22/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8, 19-52, 54, 55, 66-83, 94-101 and 112-127 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 19-52, 54, 55, 66-83, 94-101 and 112-127 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 22 February 2006 have been fully considered but they are not persuasive. On pages 18-19 of the Response, Applicant asserts that "Puuskari fails to disclose to establish [sic] a second Point-to-Point Protocol [PPP] link having the same IP address as a first [PPP] link and to differentiate the endpoints of the first [PPP] link and the second [PPP] link using a link characteristic as is substantially claimed in the present application." Examiner, respectfully, disagrees that this limitation is not obvious in view of the cited prior art.

2. Puuskari is directed to finding a way to "[set] different QoS values for different applications that use the same IP address" (col. 3, lines 16-19). Puuskari solves this problem by differentiating between different PDP contexts using a QoS parameter as to allow "a dedicated QoS profile for each of several Internet user applications run in the mobile station for a [sic] IP address" (col. 4, lines 13-24). While Puuskari is expressly directed to PDP contexts, Puuskari explicitly states that "[t]his concept of the invention may applied [sic] in any packet data communications network, even in one not using any PDP context, such as TCP/IP" (col. 5, lines 13-16). Further, it is noted that PDP is a data link layer protocol (col. 4, lines 55-65).

3. In paragraphs 1009-1010 of the Specification, Applicant states that

[T]here is an increasing desire and need to provide different types of services simultaneously through a single wireless device. . . Thus, there is a need in the art for a way of supporting multiple PPP connections in a single wireless device, where the PDSN is able to differentiate individual PPP session termination points operating under one IP stack within a wireless device.

It is noted that PPP is a data link layer protocol. Newton's Telecom Dictionary, "PPP" definition.

Art Unit: 2665

4. Therefore, from the above discussion, three points should be noted: (1) both Applicant and Puuskari are directed to solving the same problem, namely finding a way to differentiate between different communications sent using a single IP address; (2) both Applicant's admitted prior art and Puuskari handle information at the same layer, namely the data link layer; and (3) the concept of Puuskari's invention may be applied in any packet data communication network, even if PDP contexts are not used. Thus, Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the invention to use Puuskari's invention in a system utilizing PPP links such that a second Point-to-Point Protocol link is established having the same Internet Protocol Address as a first Point-to-Point Protocol link and the endpoints of the first Point-to-Point Protocol link and the second Point-to-Point Protocol link are differentiated using a link characteristic in order to enable any number of PPP links tied to the same IP address to be used simultaneously.

5. In view of the foregoing, Examiner maintains that the claims are rendered obvious by the cited prior art.

#### ***Specification***

6. Examiner requests that Applicant update the application information seen on page 9, lines 7-8 in order to reflect any changes in the status of this application.

#### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2, 5-8, 19, 20, 23-28, 31-38, 41-46, 49-52, 54, 55, 66-69, 72-77, 80-83, 94, 95, 98-101, 112, 113, 116-121, and 124-127 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Puuskari (USPN 6,728,208), of record.

9. Regarding claims 1, 27, 35, 45, 66, and 76, Applicant admits as prior art in a wireless communication system, a method comprising the steps of and a wireless device comprising means for: establishing a first Point-to-Point Protocol link having an Internet Protocol Address (page 1, paragraph 1002-page 5, paragraph 1010). Applicant does not express as prior art establishing a second Point-to-Point Protocol link having the same Internet Protocol Address as the first Point-to-Point Protocol link and differentiating the endpoints of the first Point-to-Point Protocol link and the second Point-to-Point Protocol link using a link characteristic. Puuskari teaches, in a wireless communication system, establishing a first PDP channel having an Internet Protocol Address (col. 1, lines 54-58; col. 4, lines 13-24; and col. 6, lines 12-20); establishing a second PDP channel having the same Internet Protocol Address as the first PDP channel (col. 3, lines 16-32 (problem) and col. 4, lines 13-24 (solution)); and differentiating the endpoints of the first PDP channel and the second PDP channel using a link characteristic (col. 4, lines 13-24). Puuskari also teaches that the concepts of this invention can be used in any packet data communication network (col. 5, lines 12-16) and in any wireless communication network (col. 16, lines 45-53) including PPP networks (col. 15, lines 36-38). Puuskari teaches that this invention enables any number of PDP contexts tied to the same IP address to be used simultaneously (col. 4, lines 13-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to establish a second Point-to-Point Protocol link

Art Unit: 2665

having the same Internet Protocol Address as the first Point-to-Point Protocol link and to differentiate the endpoints of the first Point-to-Point Protocol link and the second Point-to-Point Protocol link using a link characteristic in order to enable any number of PPP links tied to the same IP address to be used simultaneously.

Regarding claim 19, incorporating the rejection of claim 1, Applicant in view of Puuskari discloses each limitation in claim 19, as seen in the rejection of claim 1, except for providing multiple grades of Radio Link Protocol service to an application of a wireless device. Applicant in view of Puuskari suggests providing multiple grades of Radio Link Protocol service to an application of a wireless device. Puuskari teaching including in each packet transmitted by an application a QoS parameter which will be used to enforce the QoS requirements for that packet (col. 4, lines 13-24). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide multiple grades of RLP service to an application in a wireless device in order to allow an application to differentiate between QoS requirements for a particular packet.

Regarding claims 94 and 120, incorporating the rejection of claim 1, Applicant in view of Puuskari discloses each limitation in claims 94 and 120, as seen in the rejection of claim 1, except for implementing the method using a computer-readable medium having instructions stored thereon to cause computers in a communication system to perform the method. Examiner takes official notice that it is well known in the art to implement a method using software since software is more flexible than hardware. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the method using software since software is more flexible than hardware.

Art Unit: 2665

Regarding claim 112, incorporating the rejection of claim 19, Applicant in view of Puuskari discloses each limitation in claim 112, as seen in the rejection of claim 19, except for implementing the method using a computer-readable medium having instructions stored thereon to cause computers in a communication system to perform the method. Examiner takes official notice that it is well known in the art to implement a method using software since software is more flexible than hardware. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the method using software since software is more flexible than hardware.

10. Regarding claims 2, 20, 28, 38, 46, 69, 77, 95, 113, and 121, Applicant in view of Puuskari discloses that the link characteristic is Quality of Service (Puuskari: col. 4, lines 13-24; col. 4, lines 35-58; and col. 5, lines 19-26).

11. Regarding claims 5, 23, 31, 41, 49, 72, 80, 98, 116, and 124, Applicant in view of Puuskari suggests that the link characteristic is Radio Link Protocol transmission delay (Applicant: pages 4-5, paragraph 1010 and Puuskari: col. 2, lines 23-35, esp. col. 2, lines 26-27, and col. 4, lines 44-54).

12. Regarding claims 6, 24, 32, 42, 50, 73, 81, 99, 117, and 125, Applicant in view of Puuskari suggests that the link characteristic is guaranteed delivery level (Applicant: pages 4-5, paragraph 1010 and Puuskari: col. 2, lines 23-35, esp. col. 2, lines 28-35, and col. 4, lines 44-54).

13. Regarding claims 7, 25, 33, 43, 51, 54, 74, 82, 100, 118, and 126, Applicant in view of Puuskari discloses that the wireless device uses Simple Internet Protocol service (Applicant: page 3, paragraph 1008).

Art Unit: 2665

14. Regarding claims 8, 26, 34, 44, 52, 55, 75, 83, 101, 119, and 127, Applicant in view of Puuskari discloses that the wireless device uses Mobile Internet Protocol service (Applicant: page 3, paragraph 1008).

15. Regarding claims 36 and 67, Applicant in view of Puuskari discloses that the wireless network node is a Packet Data Service Node (Applicant: pg. 3, paragraph 1007).

16. Regarding claims 37 and 68, Applicant in view of Puuskari discloses that the wireless network node is an Interworking Function (Applicant: pg. 3, paragraph 1007).

17. Claims 3, 21, 29, 39, 47, 70, 78, 96, 114, and 122 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Puuskari (USPN 6,728,208), of record, as applied to claims 1, 19, 27, 35, 45, 66, 76, 94, 112, and 120 above, and further in view of Sen et al. (USPN 6,765,909), of record.

18. Regarding claims 3, 21, 29, 39, 47, 70, 78, 96, 114, and 122, Applicant in view of Puuskari does not expressly disclose that the link characteristic is compression type; however, Applicant in view of Puuskari does suggest that various characteristics could be used (Puuskari: col. 5, lines 19-26). Sen discloses, in a system for supporting multiple QoS levels in a 3G packet data session, that PPP supports different types of compression schemes that can be used to distinguish one connection from another (col. 2, lines 35-41 and col. 6, lines 39-45). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the link characteristic be compression type since PPP supports different types of compression schemes that can be used to distinguish one connection from another.

19. Claims 4, 22, 30, 40, 48, 71, 79, 97, 115, and 123 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Puuskari (USPN 6,728,208), of



Art Unit: 2665

record, as applied to claims 1, 19, 27, 35, 45, 66, 76, 94, 112, and 120 above, and further in view of Chuah et al. (USPN 6,400,722), of record.

20. Regarding claims 4, 22, 30, 40, 48, 71, 79, 97, 115, and 123, Applicant in view of Puuskari does not expressly disclose that the link characteristic is encryption level; however, Applicant in view of Puuskari does suggest that various characteristics could be used (Puuskari: col. 5, lines 19-26). Chuah teaches, in a wireless system supporting PPP and IPCP (col. 10, lines 33-45 and col. 11, lines 21-42), that PPP packets can be encrypted before being encapsulated in RLP if encryption is negotiated between the mobile user and the home agent (col. 29, lines 48-59). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the link characteristic be encryption level since PPP supports different levels of encryption that can be used to distinguish one connection from another.

### *Conclusion*

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Goyal et al. (USPN 6,466,985) see entire document which pertains to providing quality of service using IP.

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2665

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

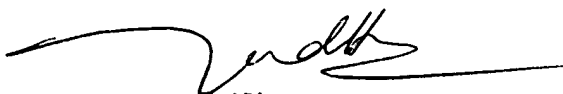
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*DJR*

Daniel J. Ryman  
Examiner  
Art Unit 2665

  
HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600